

Growth and development

DUXBURY

AND THE NEGOTIATED

LANDSCAPE

1973

FOREWORD

Look at your tax bill, then multiply it by two. If present trends continue, that will be your approximate tax five years from now.

Several years ago, the Planning Board became concerned about rising taxes and about other problems which come with rapid growth. The Board was already putting in long hours overseeing subdivisions, and felt that it did not have the time to investigate possible remedies for Duxbury's situation. It asked the Selectmen to appoint a Land Study Committee. This Committee, as appointed in April 1971, included 13 members, 3 from the Planning Board, and others from Duxbury organizations and Town committees.

The Land Use Study Committee recommended that the Town hire Rahenkamp, Sachs, Wells and Associates of Philadelphia to prepare a plan and to outline procedures. The 1972 Town Meeting voted to employ the firm and provide funds.

The plan which the Philadelphia firm prepared is described in this pamphlet. Although it follows many well-known principles of land use planning, it is not exactly like any other plan. It is specifically tailored to Duxbury's needs.

SUMMARY

The mix of housing in Duxbury is badly out of balance. Houses being built have three or more bedrooms, and these houses attract families with children to educate. Many studies from different parts of the country, including Duxbury, show that single family houses of this type cost a town more in services, particularly education services, than they produce in tax revenue. On the other hand, garden apartments and town houses with mostly one and two bedroom units can produce a considerable sum in net revenue.

The immediate problem is -- how do we get the revenue producers built without greatly altering the character of the Town? At the same time, how do we protect our natural resources of fresh and salt water, woodland and open space? How do we get developers to follow the grand design? The plan, as devised, takes into account zoning law, the environment and business probabilities. It puts Town officials in a position to negotiate from strength with developers to assure the best use of the land.

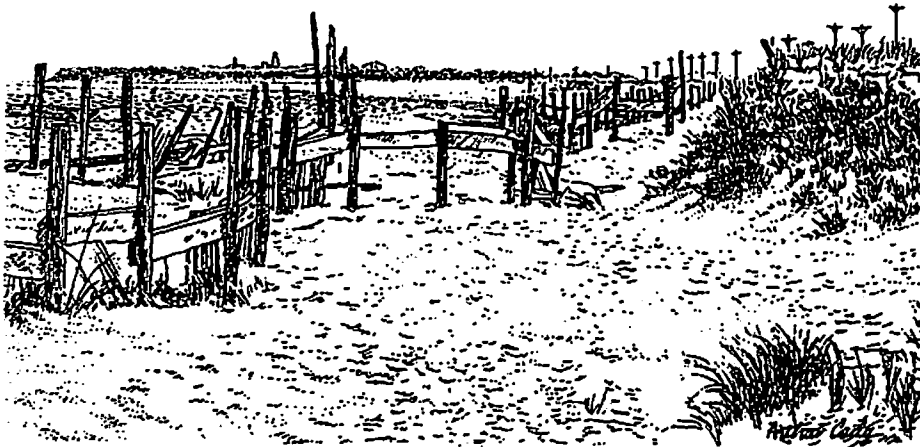
One acre zoning will be retained throughout the Town. There will be an alternative system for regulating development which will allow the developer, in designated districts and subject to strict regulation, to build garden apartments and townhouses. Under the regulations of the alternative system, a builder must apply to the Board of Appeals for a special exception permit. The Planning Board will process the application and make a recommendation to the Appeals Board who will make a final determination. Subject to careful regulation, and in appropriate areas, a developer will be permitted to cluster houses.



Arthur Cady

The developer will be required to set aside substantial amounts of land for open space. In this way, some of the open space needs of the Town will be taken care of, without cost to the Town treasury. The essence of the plan is negotiation rather than conflict.

The integrity of unique areas including beaches, tidal marshes and inland wetlands will be protected by their inclusion in a conservation district. In two areas, light industry will be permitted, subject to approval of Town officials. Our present zoning has no special provision for the protection of the Duxbury environment other than wetlands. Great pains have been taken in the proposed plan to protect our ecology.



DUXBURY AND THE NEGOTIATED LANDSCAPE 1973

The program described in this pamphlet is designed to make it possible for Duxbury to attain certain goals. The Town overwhelmingly wants to see the steady rise in taxes slowed as soon as this can be accomplished. People want Town officials and Town regulations to protect our natural resources, our bays and beaches, streams, ponds, groundwater, open space and woodland. It is plain that Duxbury citizens do not want the Town to become another dull suburb. To the extent possible, in a town that is expected to triple in population by the year 2000, many wish to see the rural and historic character of Duxbury preserved. Part of this rural atmosphere comes from the presence of our remaining agricultural enterprises, farms and cranberry bogs, and part from the freedom of young and old to keep animals on Duxbury land.

Duxbury people not only want to see the historic houses preserved, they want to see them in settings which do not detract from their charm.

We suffer from a monumental lack of one and two bedroom living units. Young people who have not started their families cannot find housing near their parents. Older people have to move away from the neighborhood of their grandchildren. These "empty nesters" would make a great contribution to the Town including the providing of revenue, but we are losing them to other communities. Some people who work for the Town find it difficult to obtain suitable housing in Duxbury.

The present zoning by-law is proving highly unsatisfactory. It is, in fact, preventing better things from happening. Our sole reliance on one-acre zoning is a principal cause of continuing tax increases. A Duxbury real estate office recently informed the Committee that its lowest priced lots are now selling for \$12,000. At that price, in order to make a profit, a developer or builder must offer a house with three or more bedrooms. Very little is being built in Duxbury except multi-bedroom houses. These appeal to couples with children to educate. The school population and school costs are zooming.

Studies conducted across the country show that three bedroom houses cost a town more in services, principally education services, than they produce in tax revenue. On the other hand, town-houses and garden apartments with one and two bedroom units, produce net revenue. The term "townhouse" is here used in the sense of three or more dwelling units built in line and connected.

Our housing mix will remain badly out of balance until we take steps to remedy the situation.

One acre zoning also produces suburban sprawl and "gridwork" development. The street and lot plan often appears like a giant waffle iron. Roads alone take up an unnecessary amount of the town's space. Under the grid system, water and utility lines are needlessly long, police and maintenance expenses are increased.

In addition, traditional zoning encourages development along existing roads, and the resultant ribbon development presents a safety hazard as well as detracting from rural character.

Our present protective by-law does give a measure of protection to inland and salt water wetlands. However, it does not protect woodlands, open space, historic sites and nearby areas. It offers no special protection to areas where our groundwater reservoirs are recharged. It does not keep building away from steep slopes from which soil can wash into streams. It does nothing to prevent the sort of monotonous development which can destroy our favorite views. There is nothing in present by-law which promotes quality in development. It does not provide a procedure for Duxbury to conserve its rural character.

It might help people to evaluate the proposed plan if it is seen against a wide background. All across the U.S.A. there is an explosion in land use planning. Towns, cities, regions are planning. Some common practices are emerging. Many planning agencies are finding that computers are invaluable. Vast amounts of information can be stored in data banks and can be readily available. The techniques of aerial surveys are being further and further refined, and these can be used to check existing maps or become the basis for new maps. Strict new controls over development and its effects upon the environment are coming into existence.

One relatively new approach to planning is the correlating of two sets of systems: man made systems and natural systems.

Man made systems include roads, schools, hospitals, cars, trucks, busses, houses, whole settlements and many other things which provide modern conveniences.

However, we cannot live without the things which nature has provided: sunlight, rainfall, lakes, streams, vegetation, open space for water recharge. These are all natural systems.

Our planners, Rahenkamp, Sachs, Wells and Associates, have devised a method to measure the impact of Duxbury's future proposed developments upon both the natural and man made systems. How does this method work?

In the first place, the firm assembled a great deal of information on both man made and natural systems. There is now readily available information on roads, schools, houses, businesses, public utilities, water lines, pumping stations, and other components of man-made systems which are necessary to the life of the Town. In addition, there is available information on underground reservoirs, streams, ponds, steep slopes, wetland, soils and other parts of the life system.

In depth information about Duxbury is stored in data banks and is available by computer. A large amount of data is presented in color on a series of thirteen maps. The maps prepared by the firm are revealing. The road map, for instance, shows all the main intersections, and how much traffic each can handle without having facilities enlarged. The water resources map shows for the first time the location of underground reservoirs and of the lands where rainfall penetrates to recharge these natural storage basins.

In the preparation of the proposed new master zoning map for the Town, the information on both systems has been used to delineate the proposed districts. When the Planning Board deals with applications for subdivisions and special exception permits, it will be able to evaluate the effects of a proposed development, using the information in the computer bank as well as on the maps.

This is the age of the computer; we should take advantage of it. When a developer submits a plan, a first computer run will show what profit he can be expected to make. When negotiations begin, this will put the Town in a strong position. A second computer run will show the effect of the proposed development on Duxbury's municipal costs. Through negotiation, the Town can secure the kind of development which should result in a more stable tax situation, while at the same time ensuring the maximum environmental protection.

This method of attaining orderly growth, unlike our present exclusive reliance on arbitrary lot sizes, is readily defensible in court, as it is firmly based on the criteria of health, safety and welfare of residents.

As has been stated, Rahenkamp, Sachs and Wells have recommended that one acre zoning remain a basic right for developers. However, they propose that, in districts where research has shown there would not be an adverse impact upon the natural and municipal systems, alternate flexible forms of development be allowed by special exception permit; specifically, clustering of single family houses, garden apartments and townhouses.

The clustering principle is in harmony with the old New England tradition of villages, open fields and forests. Clustering presents advantages to both the Town and developer.

The developer saves money because roads are shorter, on laying of utility lines, and on site preparation. He will be required to conform to strict standards and controls as outlined in the proposed by-law with regard to such things as siting of dwellings, setbacks, height restrictions, landscaping, amounts of impervious cover and protection of slopes and wetlands.

Duxbury will save on road maintenance, plowing and police patrol, as well as conserving large amounts of permanently protected open space at no cost to the Town. Moreover, when the deed-restricted open space in a cluster remains in the ownership of the residents of the development, the Town continues to receive tax revenue from the open space.

It would appear to be almost universally recognized that we must have more one and two bedroom living units to balance the great number of multiple bedroom houses already in existence. This is essential to the slowing down of the tax rise. If we do not balance the deficit producers with revenue producers, our situation will grow steadily worse.

The economics of supplying one and two bedroom units requires that a number of these units be under one roof, as in townhouses and garden apartments.

It is proposed that some land be zoned for light industry, but the great majority of towns in America are attempting to acquire industries of this type. It would be unwise to expect too much from this possible source of revenue.

The best way to begin to remedy our tax situation is the building of townhouses and garden apartments with one and two bedroom units. Provisions in the new by-law will make it possible for the Planning Board to insist that these buildings be attractive. It is felt that there is room in the 25 square miles of Duxbury for garden apartments and townhouses, if these are properly designed, built and located.

The principal inducement which the Town can offer developers to build clustered townhouses or garden apartments by the special exception permit process is to allow what is called greater "density". The word is put in quotes because the term does not always mean what it appears to signify. In land planning, density refers to the number of dwelling units, or d.u.'s per acre. A density of 1 signifies 1 d.u. per acre, a density of 6 signifies 6 d.u.'s per acre. But these d.u.'s are not necessarily the same. Obviously a single family house with 4 bedrooms will hold more people than a 1 bedroom d.u. A density of 6 per acre, as contrasted to 1, does not mean 6 times as many people.

Moreover, when it is recommended that in certain areas a density of 1-6 be allowed, this does not mean that 6 d.u.'s per acre will be allowed everywhere in that zone. It just means that in general, in this area, a range of 1-6 d.u.'s is allowable. The number is dependant upon the impact of that development upon man made systems and natural systems.



The range of densities in each district is stated in the proposed by-law and is based upon the correlation of data shown on the map series. The proposed by-law will be published in the Duxbury Clipper, issue of February 22, and the maps will be on display in the Duxbury Library before Town Meeting.

The Land Use Committee believes that this plan, together with the proposed by-law, presents Duxbury with a reasonable method, not only to improve its tax situation but to maintain an orderly and balanced development program. At the same time, the system will make it possible to preserve much of the Town's rural and historic character and to protect our irreplaceable natural resources.

The Land Use Study Committee

ILLUSTRATIONS

Historic Character -- Arthur Cady
Duxbury Beach -- Arthur Cady
Garden Apartments -- Morehouse & Chesley

PROPOSED DISTRICTS

- I. Conservation District
 - A. Includes wetlands and watershed areas
 - B. Includes publically owned open space
- II. Historic District
 - A. Includes areas and structures dated up to 1850 with historic significance
- III. Residential Compatability District
 - A. Includes all areas 200 feet from the lot lines of a lot on which there is an existing residential or institutional structure, or on which similar residential or institutional development is permitted at a density of one unit per acre.
 - B. Cluster development may be permitted by special exception permit at the same overall density of one unit per acre.
- IV. Neighborhood Business District
 - A. Includes all existing business districts
 - B. Permits similar commercial uses in those existing districts as defined in the by-law.
 - c. Permits residential development at one unit per acre.

V. Planned Development Districts 1, 2 and 3

- A. Special land uses in these districts permitted only as a special exception to the protective by-law and in conformance with standards and procedures stated in the by-law.
- B. All uses permitted in the Residential Compatability District are also permitted in the Planned Development District.
- C. Planned Development District 1
 - 1. Will allow planned development (garden apartments and/or townhouses) and/or cluster development at a maximum density range of 1-4 residential units per acre, by special exception permit.
- D. Planned Development District 2
 - 1. Will allow planned development and/or cluster development, with integrated neighborhood business, at a maximum density range of 1-6 residential units per acre, by special exception permit.
- E. Planned Development District 3
 - 1. Will allow planned development and/or cluster development with integrated business and/or light industrial use at a maximum density range of 1-8 residential units per acre, by special exception permit.